

REMARKS

The Final Office Action dated October 16, 2007 has been reviewed and carefully considered. Claims 1-21 remain pending, the only independent claims being claims 1 and 15. Reconsideration of the above-identified application is respectfully requested.

Claims 1-3, 5-8, 14, 15, 17, 19 and 20 stand rejected under 35 USC 103(a) as being unpatentable over Graves, U.S. Patent No. 5,410,344 in view of Tsai, U.S. Patent No. 6,697,504. Claims 9-11 and 13 stand rejected under 35 USC 103(a) as being unpatentable over Graves in view of Tsai and further view of Yeh. Claim 12 stands rejected under 35 USC 103(a) as being unpatentable over Graves in view of Tsai and further view of Inoue. Claim 18 stands rejected under 35 USC 103(a) as being unpatentable over Graves in view of Tsai and further view of Yuen. Claim 21 stands rejected under 35 USC 103(a) as being unpatentable over Graves in view of Tsai and further view of Kim. Applicants respectfully submit that the pending claims, as amended, are patentable for at least the following reasons.

The present invention relates to recommender systems and the fusion of recommender scores in a hierarchical fashion. More particularly, the present invention relates to a combination function for multiple recommendation agents. The present invention uses a hierarchical structure that permits greater flexibility, leading to better prediction accuracy, over the prior art. The hierarchy may not need to be utilized up to the nth level in all cases. For example, if a recommendation score is within a certain

predefined range at a lower level, (for example) the second level of fusion centers, the recommendation can be made to the user without the necessity of utilizing the system resources associated with having the highest level fusion center provide the recommendation. This flexibility can be advantageous when a recommender system is making recommendations to a plurality of users during at least a partially overlapping period. See page 7, line 21 – page 8, line 6.

It is respectfully submitted that in order to establish a *prima facie* case of obviousness, three basic criteria must be met:

1. there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings;
2. there must be a reasonable expectation of success; and
3. the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

Claim 1 recites the limitations of “(f) providing a plurality of second level fusion centers for receiving the first enhanced decisions output from a group of said first level fusion centers, if the first enhanced decisions are not within a predefined range;...” As indicted in the Office Action Graves fails to disclose this limitation. The addition of Tsai fails to cure the infirmities of Graves.

Tsai teaches a method of multi-level facial image recognition and system. The Office Action points to figure 8 and col. 4, lines 10-17 to show the above limitations. Applicants respectfully disagree. In these sections Tsai teaches that in a testing stage a test image is decomposed starting from four sub-images 101-104 having the lowest resolution. If the image can not be identified in this low resolution, the possible candidates are further recognized in a higher level of resolution.

Tsai's method of multi-level facial image recognition is not an analogous art to recommendations for a given user's preferences and fails to provide the motivation to combine as asserted in the Office Action, without improper hindsight by "use[ing] the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention," see *In Re Denis Rouffet*, 47 USPQ.2d 1453, 1457-58 (Fed. Cir. 1998). Tsai's use of recognition decisions it is to solve a particular problem (i.e. image recognition). The Final Office Action acknowledges that the respective systems test different data (c.g. user preferences and images), however, provides that the use of neural networks provides motivation to combine Tsai and Graves. Applicants respectfully disagree. Neural networks may be used for a number of applications and such use does not show the reasons that the skilled artisan in recommenders, confronted with the same problems as the inventor, would select the elements from the cited prior art references (in particular a different art such as image processing) for combination in the manner claimed, see *Id.*

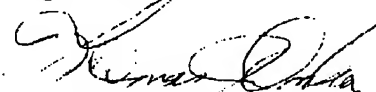
Accordingly, since the combination of Graves and Tsai, fails to teach or suggest each and every feature of the claims as required by 35 U.S.C. 103(a). Appellants respectfully submit that claims 1 and 15 are allowable.

With regard to claims 2-14 and 16-21, these claims ultimately depend from one of the independent claims, which have been shown to be not anticipated and allowable in view of the cited references. Accordingly, claims 2-14 and 16-21 are also allowable by virtue of their dependence from an allowable base claim.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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